

## **KUBOTA Corporation**

EXECUTIVE ORDER U-R-025-0885 New Off-Road Compression-Ignition Engines

Pursuant to the authority vested in California Air Resources Board by Sections 43013, 43018, 43101, 43102, 43104 and 43105 of the Health and Safety Code; and

Pursuant to the authority vested in the undersigned by Sections 39515 and 39516 of the Health and Safety Code and Executive Order G-19-095;

IT IS ORDERED AND RESOLVED: That the following compression-ignition engines and emission control systems produced by the manufacturer are certified as described below for use in off-road equipment. Production engines shall be in all material respects the same as those for which certification is granted.

MODEL YEAR ENGINE FAMILY		DISPLACEMENT (liters)	FUEL TYPE	USEFUL LIFE (hours)	
2020	LKBXL02.4E2D	1.826, 2.435	Diesel	8000	
SPECIAL	FEATURES & EMISSION	CONTROL SYSTEMS	TYPICAL EQUIPMENT	APPLICATION	
Recircula	Direct Injection, Turboc ation, Charge Air Cooler , Periodic Trap Oxidizer Catalyst	Electronic Control	Loader, Tractor, Pump, Compresso Construction Machinery, Forklif Backhoe, Mower, Roller, Skid S Sweeper, Wood	t, Garden Tractor, Mini Steer Loader, Nonroad	

The engine models and codes are attached.

The following are the exhaust certification standards (STD) and certification levels (CERT) for non-methane hydrocarbon (NMHC), oxides of nitrogen (NOx), or non-methane hydrocarbon plus oxides of nitrogen (NMHC+NOx), carbon monoxide (CO), and particulate matter (PM) in grams per kilowatt-hour (g/kw-hr), and the opacity-of-smoke certification standards and certification levels in percent (%) during acceleration (Accel), lugging (Lug), and the peak value from either mode (Peak) for this engine family (Title 13, California Code of Regulations, (13 CCR) Section 2423):

RATED	EMISSION		EXHAUST (g/kw-hr)					OPACITY (%)		
POWER CLASS	STANDARD		NMHC	NOx	NMHC+NOx	co	PM	ACCEL	LUG	PEAK
19 <u>&lt;</u> kW < 56	Tier 4 Final	OPTIONAL STD	N/A	N/A	4.7	5.0	0.03	N/A	N/A	N/A
		CERT			3.6	0.04	0.000			

BE IT FURTHER RESOLVED: That for the listed engine models, the manufacturer has submitted the information and materials to demonstrate certification compliance with 13 CCR Section 2424 (emission control labels), and 13 CCR Sections 2425 and 2426 (emission control system warranty).

BE IT FURTHER RESOLVED: That for the listed engine models, the manufacturer has complied with the more stringent set of standards from the various power categories in conformance with Section 1039.230 (e) of the "California Exhaust Emission Standards and Test Procedures for New 2011 and Later Tier 4 Off-Road Compression Ignition Engines, Part 1-D" adopted October 20, 2005 and last amended October 25, 2012.

Engines certified under this Executive Order must conform to all applicable California emission regulations.

This Executive Order is only granted to the engine family and model-year listed above. Engines in this family that are produced for any other model-year are not covered by this Executive Order.

Executed at El Monte, California on this

30 4

day of August 2019.

Allen Lyons, Chief

Emissions Certification and Compliance Division

## **Engine Model Summary Form**

E0#U-R-025-0885 Date: 8/14/2019

Manufacturer.

**KUBOTA Corporation** 

Engine category:

Nonroad CI

EPA Engine Family:

LKBXL02.4E2D

Mfr Family Name:

N/A

Process Code:

**New Submission** 

Attachment page 1 of 1

1.Liigiile Code	2.Engine Model	3.BHP@RPM (SAE Gross)	4.Fuel Rate: mm/stroke @ peak HP (for diesel only)	5.Fuel Rate: (lbs/hr) @ peak HP (for diesels only)	6.Torque @ RPM (SEA Gross)	7.Fuel Rate: mm/stroke@peak torque	8.Fuel Rate: (lbs/hr)@peak torque	9.Emission Control Device Per SAE J1930
D1803-CR-TI-EW01	D1803-CR-TI-EW	55.5@2700	46.7	21.1	132.8@1600	54.2	14.5	EM, DFI, TC, EGR, CAC, ECM, PTOX, DOC
D1803-CR-TI-EW02	D1803-CR-TI-EW	50.2@2400	46.9	18.9	132.8@1500	54.2	13.6	EM, DFI, TC, EGR, CAC, ECM, PTOX, DOC
D1803-CR-TI-EW03	D1803-CR-TI-EW	46.9@2200	46.9	17.3	132.8@1500	54.2	13.6	EM, DFI, TC, EGR, CAC, ECM, PTOX, DOC
V2403-CR-TI-EW01	V2403-CR-TI-EW	73.2@2700	44.7	27.0	189.8@1600	55.7	19.9	EM, DFI, TC, EGR, CAC, ECM, PTOX, DOC
/2403-CR-TI-EW02	V2403-CR-TI-EW	73.2@2700	44.7	27.0	180.7@1600	53.4	19.1	EM, DFI, TC, EGR, CAC, ECM, PTOX, DOC
/2403-CR-TI-EW03	V2403-CR-TI-EW	66.9@2400	45.2	24.3	180.7@1500	53.4	17.9	EM, DFI, TC, EGR, CAC, ECM, PTOX, DOC
V2403-CR-TI-EW04	V2403-CR-TI-EW	62.2@2200	45.4	22.3	180.7@1500	53.4	17.9	EM, DFI, TC, EGR, CAC, ECM, PTOX, DOC